

Project No: SERAS02-222

Log of Borehole: ND-001

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518940.4

Location: Passaic River - No Dredge Zone

Easting (feet): 572930.6

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibracore to 7 feet. Recovered 4 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, some twigs and fibrous plant fragments, becomes fine-grained sandy in the bottom 0.5 foot, little clay, very soft, wet.				
1						
2		SILTY SAND Dark gray, trace fine subangular gravel, little to some silt, little clay, dense, wet.				
3						
4		CLAY WITH SAND Dark gray, little fine- to coarse-grained sand, low plasticity, soft, wet.				
5						
6		SAND WITH SILT Dark gray, fine to coarse, little silt, some fine to coarse grained coal chips, trace fine subangular gravel, dense, wet.				
7						
8						
9						
10		End of Borehole				

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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2890 Woodbridge Avenue
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Project No: SERAS02-222

Log of Borehole: ND-002

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518911.6

Location: Passaic River - No Dredge Zone

Easting (feet): 572920.3

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibrocore to 6.9 feet. Recovered 5.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, trace fine-grained sand, faint organic odor, very soft, wet.				
1						
2		SILTY SAND Dark gray, fine to medium, little to and silt, some silt lenses, little clay, moderate organic odor, dense, wet.				
3						
4		CLAY Dark grayish brown, black from 4 to 5.5 feet, trace fine-grained sand, some silt, faint organic odor, low to moderate plasticity, wet.				
4		70 millimeter piece of slate roofing tile at 3.25 feet.				
5						
6		SAND WITH SILT Dark gray, fine to coarse, little silt, some coal clasts, dense, wet.				
7						
7		End of Borehole				
8						
9						
10						

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: ND-003

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518917

Location: Passaic River - No Dredge Zone

Easting (feet): 572912.6

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft 0 m		Sediment Surface				Advanced vibracore to 7 feet. Recovered 4.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		SOFT SEDIMENT Dark gray, clay and silt, trace fine- to coarse-grained sand, coarse subangular gravel clast on surface, strong organic odor, very soft, wet.				
2		SILTY SAND Dark gray, fine, little to some silt, little clay, small clam fragments, dense, wet.				
3		CLAY Dark grayish brown to black at 6 feet to very dark gray at 6.5 feet, trace fine-grained sand, some silt, strong organic odor, low plasticity, soft, wet.				
4						
5		Fine-grained sand lense from 6.5 to 6.75 feet.				
6						
7		End of Borehole				
8						
9						
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: ND-004

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518923.7

Location: Passaic River - No Dredge Zone

Easting (feet): 572927.2

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibracore to 8 feet. Recovered 6 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Dark gray, silt and clay, trace fine-grained sand, slight organic odor, very soft, wet.				
1						
2		SILTY SAND Dark gray, fine grained, occasional interbedded silt lenses, little clay, occasional plant fibers, faint organic odor, dense, wet.				
3						
4		CLAY WITH SAND Dark grayish brown, some silt, little fine-grained sand, occasional fibrous plant fragments, low plasticity, soft to stiff, wet.				
5		Thin layer of plant fragments at 5 feet.				
6						
7		SILTY SAND Dark gray to very dark gray from 7 to 8 feet, predominantly fine with fine to coarse lenses between 6 and 6.5 feet, little to some silt, occasional fibrous plant fragments and twigs, moderate organic odor, dense, wet.				
8						
9		End of Borehole				
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: ND-005

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518928.4

Location: Passaic River - No Dredge Zone

Easting (feet): 572922.5

Logged By: J. Bolduc

Date Drilled: 11/20/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibrocore to 6 feet. Recovered 4 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, abundant twigs and fibrous plant fragments, very soft, wet.				
1		SILTY SAND Dark gray, fine with a 2-inch thick lense of fine to coarse sand at base, trace fine subangular gravel, little to some silt, occasional intact small clam shells, dense, wet.				
2		CLAY Yellowish brown, silty, stiff, moderate plasticity, wet at top and damp at base.				
3		SAND WITH SILT Very dark gray, fine to coarse, predominantly coarse, trace fine angular gravel, little silt, single slag clast, some coarse sand to fine gravel sized coal chips, occasional twigs and fibrous plant fragments. dense, wet.				
4						
5						
6		End of Borehole				
7						
8						
9						
10						

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: TRC-001

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4519178.3

Location: Third River Confluence

Easting (feet): 573350.7

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibracore to 7 feet. Recovered 6 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, little fine- to coarse-grained sand, very soft, wet.				
1						
2		CLAYEY SAND Dark gray, greenish gray from 1.5 to 2 feet, fine, some clay, little silt, dense wet.				
3		SILTY SAND Dark gray, fine, little to some silt, occasional twigs and other fibrous plant fragments, slightly micaceous, dense, wet.				
4						
5						
6						
7		SAND WITH GRAVEL Dark gray, fine to coarse, some fine to coarse well rounded gravel, little silt, very dense, wet.				
7		End of Borehole				
8						
9						
10						
10						
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: TRC-002

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4519163.3

Location: Third River Confluence

Easting (feet): 573321.7

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibrocore to 2.3 feet. Recovered 2.25 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray to dark gray, silt and clay, little fine-grained sand, leaves, grasses, twigs and other fibrous plant fragments on surface and throughout, very soft, wet.				
2		SAND AND SILT Dark gray, interbedded fine-grained sand and silt, soft and loose, occasional twigs and fibrous plant fragments, wet.				
		End of Borehole				
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: TRC-003

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4519167.1

Location: Third River Confluence

Easting (feet): 573347.8

Logged By: J. Bolduc

Date Drilled: 11/20/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibracore to 6 feet. Recovered 4 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, little fine-grained sand, occasional twigs and fibrous plant fragments, very soft, wet.				
1		SANDY SILT Very dark gray, some fine-grained sand, soft, wet.				
2		SILTY SAND Dark gray, fine, trace medium, little to some silt, abundant fibrous plant remains. dense, wet. 0.5-inch thick layer of fibrous plant fragments at 3 feet.				
3						
4		SANDY SILT Dark gray, some fine-grained sand, occasional fibrous plant fragments, soft, wet.				
5		SILTY SAND Dark gray, fine, trace medium, some silt, occasional fibrous plant fragments, dense, wet.				
6		End of Borehole				
7						
8						
9						
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: BRA-001

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518632.7

Location: Passaic River - Below Removal Area

Easting (feet): 572756.3

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft m 0		Sediment Surface				Advanced vibrocore to 8.4 feet. Recovered 2 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		SOFT SEDIMENT Very dark gray, silt and clay, few fine-grained sand, occasional leaves, grasses, twigs and other fibrous plant fragments, very soft, wet.				
2						
3						
4		Piece of plastic film at 4 feet.				
5						
6						
7						
8						
9						
10		End of Borehole				

Drill Method: **Vibrocore**

Drill Company: **Aqua Survey, Inc.**

Hole Size: **4 inches**

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Project No: SERAS02-222

Log of Borehole: BRA-002

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518755.1

Location: Passaic River - Below Removal Area

Easting (feet): 572774.9

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft m		Sediment Surface				Advanced vibrocore to 8.2 feet. Recovered 6.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		SOFT SEDIMENT Dark gray, silt and clay, little fine-grained sand, abundant leaves, grasses, twigs and other fibrous plant fragments often in 1-inch thick layers, very soft, wet.				
2						
3						
4						
5						
6		SAND WITH SILT Dark gray, fine, some clay, little silt, loose, occasional grasses, twigs, and other fibrous plant fragments, very loose, wet.				
7						
8		SILTY SAND Dark gray, fine, some silt, little clay, slightly micaceous, few plant fragments, dense, wet.				
9						
10		End of Borehole				

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: BRA-003

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518694.8

Location: Passaic River - Below Removal Area Easting (feet): 572758.9

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft 0 m		Sediment Surface				Advanced vibracore to 6.4 feet. Recovered 5.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		SOFT SEDIMENT Very dark gray, silt and clay with fine-grained sand lenses, occasional leaves, grasses, twigs and other fibrous plant fragments, very soft to soft, wet.				
2						
3		Piece of plastic lid for coffee cup at 3 feet.				
4						
5		CLAY WITH SAND Very dark gray, little fine-grained sand, some silt, low plasticity, soft, wet.				
6		SILTY SAND Dark gray, fine, some silt, occasional twigs and other fibrous plant fragments, dense, wet.				
7		End of Borehole				
8						
9						
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: BRA-004

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4518692.7

Location: Passaic River - Below Removal Area

Easting (feet): 572775.4

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0		Sediment Surface				Advanced vibracore to 8.6 feet. Recovered 5.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
0		SOFT SEDIMENT Very dark gray, silt and clay, little fine-grained sand, occasional leaves, grasses, twigs and other fibrous plant fragments, very soft, wet.				
1						
2						
3		CLAYEY SAND Very dark gray, fine, and clay and silt, very loose, occasional grasses, twigs, and other fibrous plant fragments, very loose, wet.				
4						
5		SANDY CLAY Very dark gray, occasional fine-grained sandy interbeds, some silt, low plasticity, occasional twigs and other fibrous plant fragments, soft, strong organic odor from 6 to 8.6 feet, wet.				
6						
7						
8						
9		End of Borehole				
10						

Drill Method: Vibracore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Sheet: 1 of 1

Project No: SERAS02-222

Log of Borehole: DD-001

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT


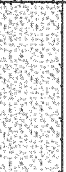
Northing (feet): 4528678.8

Location: Passaic River - Dundee Dam

Easting (feet): 573166.9

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft m 0		Sediment Surface				Advanced vibrocore to 3.5 feet. Recovered 1.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		GRAVEL Dark gray, fine, and fine- to coarse-grained sand, trace silt, occasional 15 millimeter diameter intact clam shells, loose, wet.				
2		SILTY SAND Dark gray, fine to coarse, predominantly fine to medium, trace fine and coarse subrounded gravel, little to some silt, dense, wet.				
3		End of Borehole				
4						
5						
6						
7						
8						
9						
10						

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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Project No: SERAS02-222

Log of Borehole: DD-002

Project: Givaudan - Transport Pathway to Passaic River

Client: EPA/ERT

Northing (feet): 4528508.2

Location: Passaic River - Dundee Dam

Easting (feet): 573075.6

Logged By: J. Bolduc

Date Drilled: 11/21/13

SUBSURFACE PROFILE			SAMPLE			Notes
Depth	Symbol	Description	Number	Type	Recovery	
0 ft 0 m		Sediment Surface				Advanced vibrocore to 4.5 feet. Recovered 2.5 feet of sediment in core barrel. Depths accordingly adjusted for core compaction.
1		SAND Brown, fine to coarse, predominantly fine to medium, little to some fine and coarse, subangular to subrounded gravel, trace silt, dense, wet. Coarse-grained coal clasts from 0 to 0.5 feet.				
2						
3						
4						
5		CLAY Very dark gray, some silt, trace fine-grained sand, low plasticity, soft to stiff, strong organic odor, wet.				
6		End of Borehole				
7						
8						
9						
10						

Drill Method: Vibrocore

Drill Company: Aqua Survey, Inc.

Hole Size: 4 inches

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